

Effective Electric Car Policy

A review of Norway and California

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INTRODUCTION

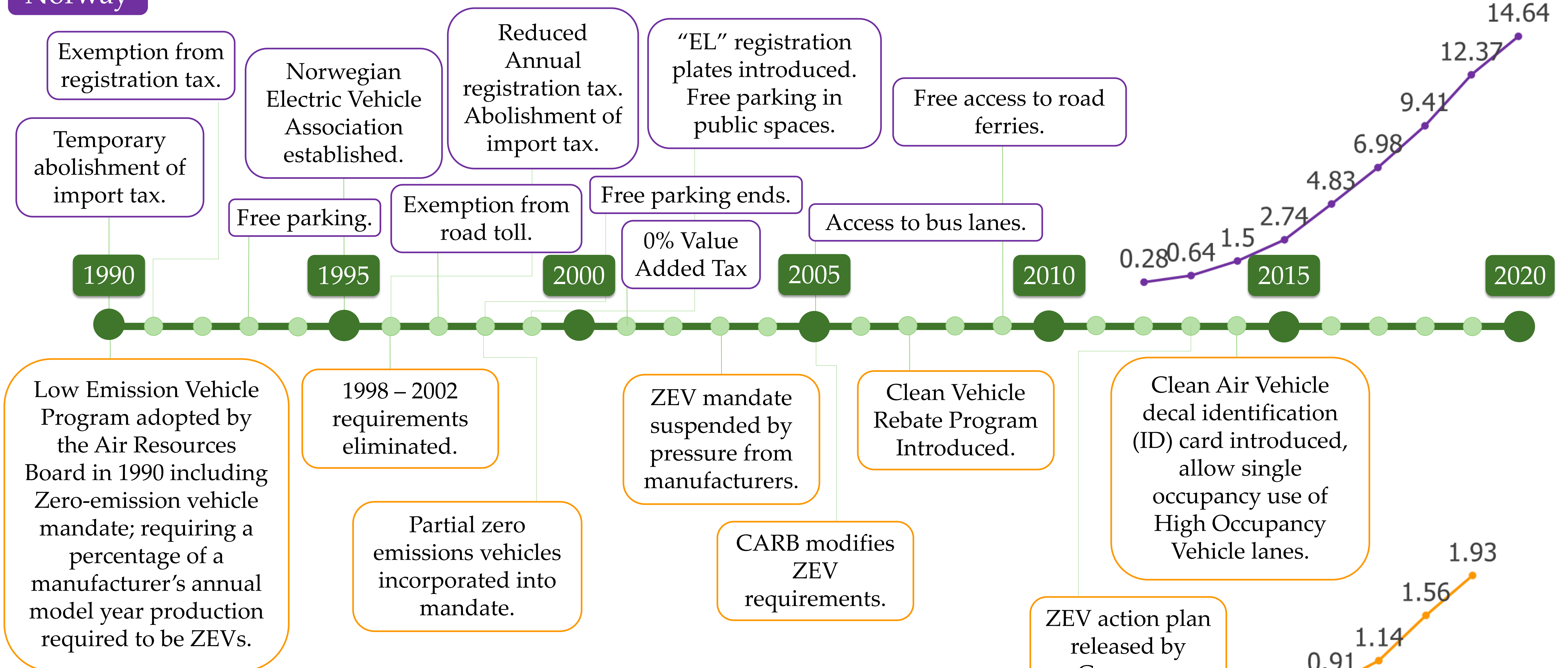
The transport sector is a significant contributor to greenhouse gas emissions. Reducing the number of fossil fuel vehicles on the road will decrease New Zealand's carbon footprint while also improving air quality, thereby improving the health of New Zealanders. Electric cars produce less emissions, so a transition to their use can contribute to this goal. In order for an uptake in electric cars to be achieved in New Zealand, policy supporting the ideal will have to be implemented. This review looks at international uptake and corresponding policies to guide New Zealand's policy decisions.

AIM

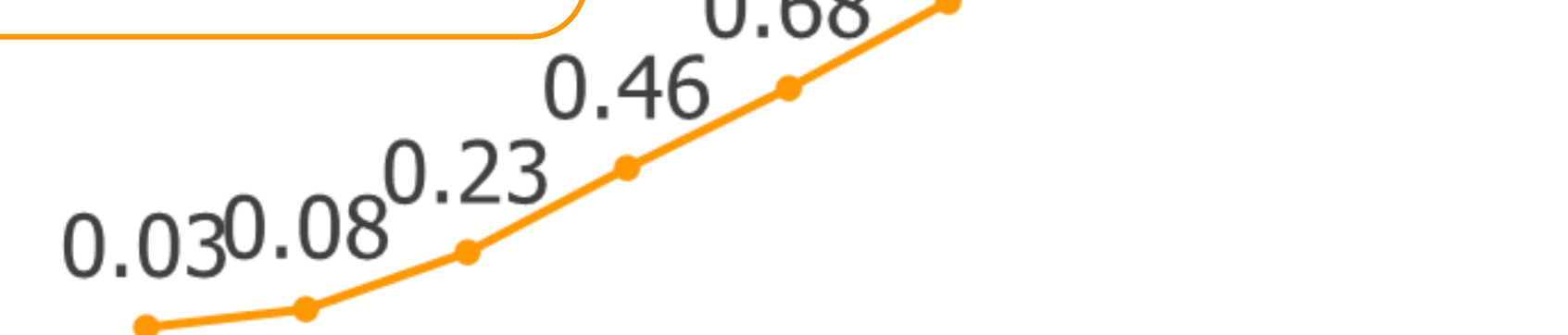
To determine places that have a high fleet share of electric cars. To identify the policies that enabled this uptake, how, when and why they were implemented and what were the most effective or important. To understand how similar policies may be utilised in New Zealand as well as their impacts on other transport parameters.

RESULTS

Norway



California



CONCLUSION

Both California and Norway began introducing electric car policy 20 years ago. California focused on the manufacturing of electric vehicles which required significant amendment in its first 10 years. Norway quickly introduced financial incentives for purchasing an electric vehicle. However as depicted in the timeline both places did not see a measurable increase in uptake of electric vehicles until after 2010. This shows that a combination of policies must be in place for significant uptake to be achieved and that there is a notable effect lag.

For New Zealand a range of policies will be required to increase our electric car fleet share. This will include supporting a market of, and decreasing the initial price of electric cars. Implementation of this type will be a cost to government, so it will have to first determine if this is a priority for the transport sector in countering climate change and improving health. It is evident that both Norway and California's policies were implemented as part of a broader climate policy. Other considerations are the potential impacts on public transport and how equitable these policies would be in a New Zealand context.

ABBREVIATIONS

ZEV = Zero emission vehicle
CARB = California Air Resources Board

REFERENCES

- 1) European Alternative Fuels Observatory. Available from <https://elbil.no/english/norwegian-ev-policy/>
- 2) California Energy Commission (2020). California Energy Commission Zero Emission Vehicle and Infrastructure Statistics. Retrieved from <https://www.energy.ca.gov/zevstats>
- 3) Norwegian EV policy. Available from <https://elbil.no/english/norwegian-ev-policy/>
- 4) California ZEV. Available from <https://www.transportpolicy.net/standard/california-zev/>